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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/076,603	02/19/2002	Takemi Hasegawa	50395-134	2299

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EXAMINER
HOFFMANN, JOHN M

ART UNIT	PAPER NUMBER
1731	

DATE MAILED: 04/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/076,603

Applicant(s)

HASEGAWA ET AL.

Examiner

John Hoffmann

Art. Unit

1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 and 24 is/are pending in the application.
- 4a) Of the above claim(s) 4 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-16 and 24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Newly amended claim 4 is directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: claim 4 is of a specie where the holes are filled and discharged during the second step. This is mutually exclusive of the previously searched and examined specie of claim 3 which requires that second step occurs while the holes are filled. There would be an unreasonable burden on the Office to search and examine this new and mutually exclusive specie

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claim 4 is withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 103

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-2 and 6-14 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Turpin 5167684, Berkey 5152818 and Yamauchi 4834786.

Looking at preform of figures 1a-b of Turpin, holes 13 and 14 are formed in the preform: see col. 2, line 52-55. It is deemed that 13 and 14 are "holes" because they are openings/gaps. This is deemed to be the broadest reasonable interpretation of "hole"; applicant has not specifically and clearly given another meaning to "hole". Turpin does not disclose the second step. The third step (including the pressure control) is disclosed at col. 4 lines 6-30, figure 4 as well as other places.

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It is well known that OH in a glass fiber can cause the light in the fiber to be absorbed – for example see Yamauchi, col. 4, lines 34-45. It would have been obvious to dehydrate the Turpin preform, so as to remove any OH impurity. Berkey is cited as teaching a way to dehydrate preforms of the same structure of Turpin, namely heating the preform. See col. 7, lines 21-24 of Berkey. Additionally, examiner gives Official notice that heating is an known easy way to dry almost anything.

It would have been obvious to use heat to dry the Turpin preform, so as to make sure no OH contaminates the final fiber.

Claim 2: Berkey also teaches blowing gas through the holes to dry them. Blowing on things is another well known way to assist the drying of nearly anything. It would have been obvious to flow gas through the Turpin preform while heating it, so as to remove any of the OH ions. As to doing it in a drawing tower. It would have been obvious to the drying in the same place as the drawing (i.e. in the drawing tower) so as to save the time/cost of transferring the preform – and to reduce the risk of dropping the preform and breaking it.

Claim 6, it would have been obvious to heat the preform as high as reasonably possible to remove as much OH as possible.

Claim 7, it would have been obvious to use as dry a gas as possible – so as to remove as much OH as possible. Any OH in the air could diffuse back into the glass.

Claims 8-9 Berkey teaches using nitrogen. This is interpreted to mean pure or nearly pure nitrogen – i.e. at least 99%.

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Claims 10-11: Examiner gives Official notice that Chlorine is a well known gas that is used to aid in the drying of glass. It would have been obvious to use chlorine to aid the drying.

Claims 12-13: Berkey teaches the use of etchants as claimed: See from col. 5, line 63- col.6, line 16. Berkey gives various reasons for using the etchant. IT would have been obvious to etch the Turin bores in the manner that Berkey teaches – for any or all of the reasons that Berkey teaches.

Claim 14 is met for the reasons given above, except for the adjusting. It would have been obvious to expect that the controlling process would entail a change in pressure that would have to be adjusted to the nominal pressure. Clearly, if the pressure was expected to stay constant, there would not be much need for a control system or a sensors.

Claim 3: As seen in figure 4 of Turpin and col. 4, line 51 the ends of the holes are substantially closed: it is deemed that 20-40 microns are substantially not significant. It is deemed that it would be unreasonable to interpret the claims as excluding miniscule holes because a potential competitor could easily avoid infringement by having micron-sized holes. Furthermore, it is deemed that the 2nd and 3rd steps are substantially simultaneous. Again, Examiner has no basis for imparting a narrower interpretation to the claims which might permit a potential competitor to avoid infringement merely by having some of the drying performed during the drawing step.

Claim 5: see how claim 3 is treated above. Further, see Turpin col. 3, lines 1-20 which refer to “pressure variations” and the control of pressure: thus the pressure is not

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constant. Therefore it is presumed that at some times the pressure is lower/reduced as compared to other times.

Claim 15 does not clearly state a step of forming the preform or a step of drilling. Parent claim 1 indicates that the first step "comprises" a forming step. One reasonable interpretation of claim 15 is that it further comprises forming the preform. But on the other hand, the relevant steps would be, a) forming the preform b) forming the holes in the preform.

Furthermore it suggests that the preform is formed "in the first step". However, it seems that the first step is the creation of holes in the preform which would seem to require that the preform is made from the columnar rod PRIOR to the first step.

For these reasons it is deemed that claim 15 merely defines the preform in a product-by-process fashion – thus does not substantially change the process – only the starting material. It is deemed that the Turpin preform is substantially the same as a preform which was made from a columnar glass rod by means of drilling as claimed. Examiner is not exactly sure whether this "broadest reasonable interpretation" is actually reasonable. If Applicant is of the position that the proper interpretation should be narrower, then Applicant should point out what that narrower interpretation/scope is and this rejection will most likely be dropped. If, on the other hand, Applicant merely disagrees with the Office, but fails to point out what the claim is limited too, such may be insufficient for the Office to withdraw the rejection. The Office will not allow the claim until the record is reasonably clear as to what the claim covers.

Claims 1, 3, 5, and 15 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bailey 4157906 in view of Blanco 4693551.

See how Bailey was applied previously. However, Bailey does not disclose holes along the fiber. Based on Applicant's arguments, it is deemed that the preamble breathes life and meaning into the claims – even though the body of the claim does not have any mention of the holes of the preamble.

Blanco discloses fibers that have holes that are 'along' the fiber. The holes are created by the sheathing – see figure 1. It is noted that the present claims do not have require that the holes be in the fibers; thus it is deemed that it would not be proper to read the claim so narrowly.

It would have been obvious to place the Bailey fiber in the Blanco sheathing for any of the advantages that Blanco discloses.

Claim 1 and 15 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kelleher 2002/0155592 in view of Turpin 5167684.

Kelleher discloses drilling glass to form preforms for drawing hollow fibers (paragraph [0032]), and then heating and drawing (para [0033]). However no details of the drawing process is taught. Turpin teaches how to draw hollow fibers from hollow preforms. As indicated on col. 3, lines 15-28 of Turpin, it is impossible to control the

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size of the recesses without controlling the pressure. Thus it is deemed necessary that Kelleher had to control the pressure.

It would have been obvious to use the Turpin method for drawing the Kelleher preform, because some sort of pressure control is necessary and Turpin supplies the requisite teachings for making the hollow fibers.

Response to Arguments

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

It is argued that the Office's position regarding transfer of the preform lacks factual basis. This is not convincing. The examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, it is based on knowledge generally available to one of ordinary skill in the art. It appears to be applicant's position that a patent is warranted because Applicant performs two processes in a single furnace, rather than in two separate furnaces. Without a showing of new and unexpected results (or other secondary consideration), the location of a step is not patentable.

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From MPEP 2144.04

E. Making Continuous

In re Dilnot, 319 F.2d 188, 138 USPQ 248 (CCPA 1963) (Claim directed to a method of producing a cementitious structure wherein a stable air foam is introduced into a slurry of cementitious material differed from the prior art only in requiring the addition of the foam to be continuous. The court held the claimed continuous operation would have been obvious in light of the batch process of the prior art.).

The reverse would have also been obvious. Performing the Turpin process by a continuous (assembly line type) arrangement (i.e. moving from furnace to furnace) makes the batch process (i.e. performing everything in a single furnace) obvious.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

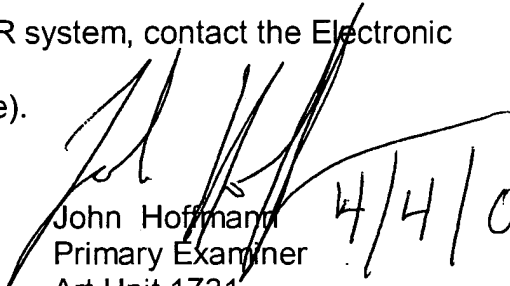
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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Hoffmann whose telephone number is (571) 272 1191. The examiner can normally be reached on Monday through Friday, 7:00- 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


John Hoffmann
Primary Examiner
Art Unit 1731

4/4/05

jmh